

WAIS Inc

Wide Area Information Servers

June 18, 1994

WAISites,

This should be a fun and productive meeting where we get to direct WAIS Inc's next 2 years. Thank you for helping.

WAIS Inc is one of very few profitable Internet companies-- a very hot area with lots of new entrants. We have the opportunity to grow this company hard and fast.

We have put together a set of materials about our company, but other materials are available. Please read these materials and suggest inspiring background reading for others to read.

Sincerely yours,

Brewster Kahle

WAIS Inc Planning Meetings

Brewster Kahle

June 5, 1994

Company Confidential

Goal: Create the company product and partner strategy for the next 2 years.

How: Sequester the board and management, with advisors and employees when appropriate. The result is a written plan somewhat like a business plan, but with the focus of guiding management.

When: June, 1994.

June 18 Distribute materials

June 20 Staff meeting with participants

June 19,21 Planning meeting at WAIS Inc offices

Rest of June Follow-up and Refinement

Who (alphabetical): Bill Dunn, Brewster Kahle, Bruce Gilliat, Gary Hromadko, John Duhring, Nick Scharf. Others as appropriate.

After: Advisory council for our direction: Terry Winograd Stanford, Peter Lyman UCLA, Bill from AOL, Lew Tucker TMC, Bob Clark EB, ...?

Suggested Agenda:

What lessons can we draw from our 2 years?

What markets are we are trying to serve?

What is our product/service going to be?

What technology changes and competition is likely in our market?

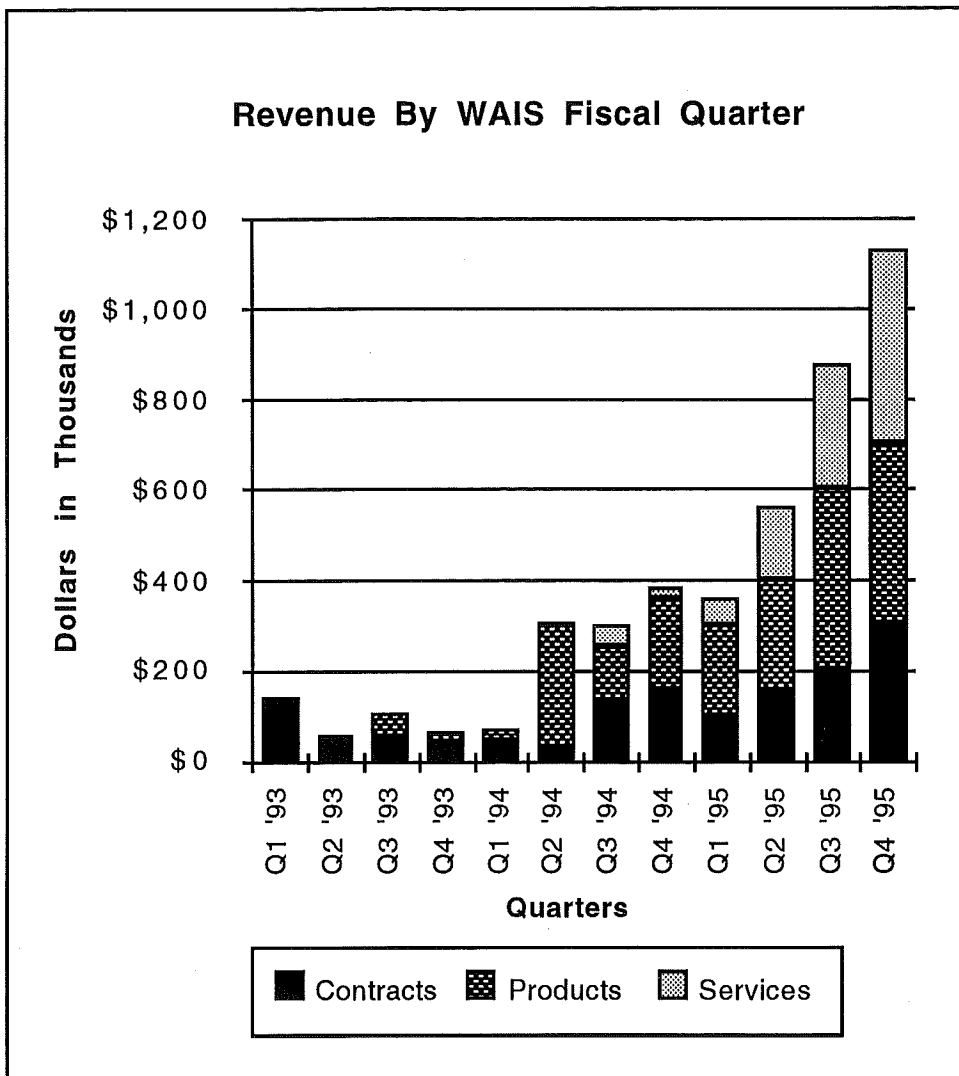
What is our partner strategy?

What are our revenue targets?

How much outside money do we need?

What company structure is required meet this plan?

I have included a set of materials that give some background on where we are now. This is not meant to be a proposal, but rather background on our company.



Not confirmed numbers. Fiscal 94 is July 1, 1993 to June 30, 1994 (almost over)

Fiscal	1994:	1995 bookings	1995	1996
revenue:	1,338,287	348,785	3M	10M
Expenses:	788,089			
Profit:	550,198			

WAIS Inc Current Business

Brewster Kahle
June 6, 1994
Company Confidential

WAIS Inc sells tools and services to network publishers. Network publishers are traditional publishers, government, libraries, and distributed corporations that want to make textual and image information available over networks.

To achieve these goals we pursue contract work, sell products, and are starting to run a network publishing operation ourselves. Broken out here is government in DC work since it is growing to be more and more distinct from our Menlo Park operations.

Overall business plan:

- 1993 Contract work, build the product 1.0
- 1994 Sell the product, build info services, continue contracts, build v 2.0
- 1995 Sell products, scale up Info Systems, license parts of product
- 1996 Info generating significant royalty, selling products, high profile contracts

Government Systems and Sales for Fiscal 1994 (July 93-Jun 94)

Selling to the government is 50% of our business broken up into contract (17%) and product sales (33%). Our two big contracts came through and are proceeding well. The product sales are often closely related to the contract work. We have one person full time on contract fulfillment and sales (Kevin Oliveau), and Brewster is spending a decreasing amount of time in sales.

If we do not actively push this area, we will probably lose it. Strategy decisions:

- Make a self supporting DC office (total cost: \$200k for fiscal '95)
- More on sales front?

Q4 93-Q1 94: Open Source, and DTIC are our major accounts for building information services. DTIC based in DC and Open Source is both Menlo Park and DC.

Systems Sales Fiscal 1994 (July 93-Jun 94)

This contract work is pre-paid work for customers (other than government) (15% of our business). This breaks into publishing systems and protocol piece integration (4% of our business).

On publishing systems we have 2 people and 2 main contracts (John Duhring, Dan Aronson; and DowJones and Scholastic). On protocol licensing we have 1 person and 2 new contracts (Margaret St Pierre; Fulcrum and Conquest). Sales is a decreasing part of Brewster's time.

Both of these areas will need at least 1 more technical person each.

Strategy decisions:

- Do we focus on sales to publishers?

Our selling structure on this has been to write lots of proposals. Getting more efficient at this is important. We are missing opportunities in this area by our proposal writing volume. We are starting to move from \$25k-\$50k proposals to \$100k-200k proposals.

Q4 93-Q1 94: DowJones is our major account based in Menlo Park.

WAIS Inc Products Fiscal 1994 (July 93-Jun 94)

Product sales are "on-the-pricelist" sales. 68% of total sales = 33%gov + 33%com + 2%edu. These are often part of contracts so the sales of our products often resemble contract sales. Most of our product sales have come from people who have used the freeware for a long time.

We stand to fall behind this area if we do not invest more in product development. Strategy decisions:

- Reorganize our server product to allow independent development?
- Better marketing and OEM sales efforts?
- Recruit an Engineering manager?

Our pricing of our products is lower than competition (other than freeware) to try to get volume. We, only now have a sales force, so our success here is limited. OEM sales where our product is bundled or pieces modified and sold are an increasing part of our sales. The sales cycle is long-- we have not gotten precise numbers but it is over a year since they start using WAIS, and 6-9 months after they start to consider buying the commercial software.

This year's strategy is to add a marketing person to this line of business and continue to upgrade our server product line while adding new components to the product line.

The company structure for supporting this work is very flat-- An engineering plus marketing meeting helps form the basis of the products we will pursue, and then individual project leaders help define the product features and schedules. Sales of these products is done by Bruce Gilliat and Kevin Oliveau.

Goals for next year: Have the finest commercial Internet server product on the market. Gateway to many popular networks. Understand the sales cycle and process.

Information Services from WAIS Inc.

Presented by John Duhring (June 19, 1994)

What we have learned:

- Publishers want control over their assets
- Publishers want access to many markets from one source
- Users value the experience derived from the service
- WWW is adequate for now
- WAIS-based systems provide cost effective architectures for:
 - Subscription services (DowVision)
 - Sponsored services (Intel)
 - Catalog services (Scholastic)
- Issues exist but are being addressed:
 - Security
 - Billing
 - Load balancing/scalability

Current WAIS Inc. strategy:

- Team with recognized brand names
 - Knowledge of market
 - Design capabilities
 - Metadata development
- Prototype/Develop/Operate services
 - Recover costs up front
 - Participate in operational revenue
- Derive enhanced products for sale by WAIS Inc.
 - Name brand partners create product testbeds

Building "the Information Interface" (our WWW advantage) :

- Store content in a DB with easy to use access points
- Build html documents of the fly as they are retrieved from the db
- Automatically generate hypertext links from metadata to find "more like this one", with editorial guidance from the publisher.

Operational process:

- Entertain/demo to prospect, to arrive at service concept and objectives/paybacks
- Determine leverage points, estimate time and resource requirements in conjunction with engineering
- Propose system in conjunction with sales
- Prototype, build, operate

Resources:

- One engineering manager, one systems administrator (TBH)
- Need product managers, and more engineers to meet demand

Technology Outlook

Brewster Kahle
June 16, 1994
Company Confidential

Roughly, there seems to be a few trends that affect us (what am I missing?):

- Dial-up connections to the Internet will be a non-issue bringing TCP/IP to home users at 14.4kb/sec (and newer faster modems). Small business are still out in the cold.
- World Wide Web (Mosaic) has taken the Internet by storm. It is deficient, but usable. Its future is uncertain because of a central entity to keep it together. We may see many semi-compatible commercial systems based on different versions of different protocols. Z39.50 now has an uphill battle.
- Some of CD-ROM market is turning to online. This trend could speed up.
- All publishers must have a network publishing strategy (because of hype).
- Unix is the dominant server platform, but something else is likely to appear for the corporate market based on lack of user-friendly aspects. NT? Windows (Cairo)? OS2 is losing; Taligent is late; Novell is possible, but...
- Internet growth is strong, but few corporations have TCP to the desktop, but it is growing.
- Many many startups are jumping into the Internet non-market.

Sample Internet Server Product

Brewster Kahle with input from Harry Morris

Some major options:

- License pieces to others
- License IR pieces from others
- Corporate information server
- Internet publishing platform for documents

Product description: Internet publishing platform for documents.

Platforms: Unix, Windows, CDROM

Time till first ship: 12-18 months

Protocols: HTTP(WWW/Mosaic), Z39.50-v2 (client-server)

People: 3 to start, 7 by the end.

Eng mgr, 4 engineers, 1 documentation, 1 support, .5 marketing

Cost: \$1M for building 1.0. Marketing?

Cooperating companies: Intel, Apple, Sun, AOL

Competing companies: freeware, Mosaic Inc, InfoSeek,
NovX?, Oracle, Microsoft.

Distribution: freeware eval version,

\$1k-\$5k small server,

licensed big version.

Features:

billing, security

modular for licensing and modification

Integrated CDROM/Online solution

Authoring

SGML integration

	1994	1995	1996	1997
# customers:	30	100	700	2000
Revenue/cust(\$/yr):	20k	15k	5k	5k
WAIS Revenue (\$):	.7M	1.5M	3.5M	10M

Sample Internet Service

Some major options:

- Be a service bureau for publishers
- Go after successful CDROM db's to put data online
- Go after successful Dialog db's to put them on the Internet
- Go after catalog type sales to sell products
- Construct a information service for businesses
- Construct a information service for medicine
- Construct a information service for law
- Construct a information service for techies: MIS/sysadmins
- Internet library system: bboards, email, ftp (basis of an AOL)

Product description: Information Service for Businesses

Platforms: Novell Windows, Lotus Notes, Mosaic, FAX

Time till first ship: 12-18 months

People: 4 to start, 9 by the end then large sales staff.

Publisher sales, Eng mgr, 3 engineers, 1 UI designer, 1 support, 1 sysadmin, 1 marketing.

Cost: \$1.5M for building. Tremendous cost to establish our name and reputation.

Cooperating publishers: DowJones, NYTimes, ...

Cooperating tech companies: Novell, Lotus, Mosaic Inc

Competition: Dialog, Nexis, etc.; Reuters, AP, LATimes; new Inet co's

Sales strategy: telesales direct? var?

Features:

Comprehensive listings of: companies, products, people

Alerts based on profiles. (human assisted?)

	1994	1995	1996	1997
Subscribers:	0	2k	10k	50k
Revenue/subscriber (\$/yr):	0	100	100	100
WAIS Revenue (\$):	0	.2M	1M	5M

Sales and Marketing Perspective

Bruce Gilliat

6/18/94

LICENSES - SINGLE SERVER, SITE AND ENTERPRISE

Customers to date = Government & Universities

25+ sales in-process to Fortune 2000 for archiving/indexing libraries

To sell two to ten licenses per week WAIS must:

Same-day phone call return

15 minute explanation of "Where WAIS fits"

Understand customer situation/application

Understand procurement cycle

Mail packet of relevant info

Follow-up via telephone & understand competition

Requirement today for one telemarketer

VARs are there for us Internationally - support via telemarketer

ON-LINE SERVICES

Publishers at our doorstep

Need definition of what WAIS online services department does

First meeting w/publisher

WAIS history

- Brewster at MIT
- TMC/KPMG/APPLE/DOW JONES

Where WAIS fits

Online successes (DJ, EB, Scholastic)

What prospect must know

- How much data?
- At publisher or at WAIS?
- Who builds home-page, etc.
- What do they want from an online offering?

Demo on the Internet

- WEST law
- EINet
- Dow Jones
- EB
- Supermodels (photos/graphics)
- Internet Shopping Network home page

WAIS needs an account strategy at this point

- today, clients leave with "wow" but no "to-do's"

Need strategy to get proposal "out-the-door"

Upon receipt of order, need online manager to hand-off

Resources needed to sustain/build this business unit

Does WAIS want to implement this strategy to CD-ROM market?

ONLINE CATALOG BUSINESS (Inmac)

Is this business the same as the online business above?

Is outline of steps to complete a project the same as online above?

CUSTOMER SERVICE ONLINE

Novell, Cisco Systems, etc.

Is this a market that we are missing?

Is outline of steps to complete a project the same as online above?

These clients do not seem to be coming to us as are publishers and license customers

PROTOCOLS & COMMUNICATIONS - WAIS' OEM CUSTOMERS

On-the-way with Fulcrum, ConQuest and Dataware

Contacts made in exploratory stage with PLS, Silver Platter, and Excalibur

Need strategy and time for others Oracle, Verity, Frame, and others

Need account profiles of who's who and who competes with who

Opportunity for WAIS to become the de facto protocol suite for search engine market and for all organizations posting to the Internet

WAIS approaching need for product manager to support OEM

- White papers for Fulcrum sales force
- Joint press announcements
- Support desk for sales forces & their channels
- Define how "technical" support will be handled
- Forecasting revenues is hard, field visits required

VAR CHANNEL(S)

There are VARs & classical Systems Integrators ready to represent WAIS for additional market share

- Clarinet application
- Internet connectivity VARs looking to get into software (WAIS, Mosaic, etc.)
- Systems Integrators such as Highland Digital that need to know about us
 - Bruce to visit in Bay Area

Overall strategy is to hook a few VARs in the SF Bay Area and Internationally, then expand out-of-state

PUTTING OTHERS IN BUSINESS

Systems Integrators with Internet experience

Brewster friends who do not make money on the Internet today

- Do we want to bring them along for the ride?
- Do we want to push them for applications and their own profitability?
- Do we want to ignore them?

"I want to provide and resell online services, let me come-in and learn more about WAIS"

Does WAIS want to assist these people - or, do we have time to?

RFPs

Big RFPs will begin coming out as large organizations start to row a wish list for what they want in an online service

University of Illinois bid that SUN is sending to us is 300 pages, and SUN is asking WAIS how to respond to the bid

Another business opportunity, but a resource gulper along the way

The government and university customer that are our license customers today will issue RFPs in one year when they realize that they have a wish list

MARKETING ISSUES

Need version two of Internet World Bruce/John/Dia cut sheet (color, etc.)

Need fold-out on "Where WAIS Fits" that states our advantages

Need fold-out on online services that we decide to support from list above

Trade Show strategy (let's pick 'em, do 'em, and everybody helps)

Advertising - is it in WAIS' future in the next 24 months?

White papers on new ideas and easy-to-understand on what we do

- WAISgate
- Release two of WAIS
 - What features does it provide to our existing customers?
 - What features does it provide our prospects?
 - Does a new market open for us from the release?

Strategic Relationships

- SUN, DEC, SGI
 - Several projects within SUN alone
 - Big Bangs
 - Seminars (such as Mountain View)
 - ISV's and letting them know about us
 - Brewster's trip to Aspen
 - SUN Sites
 - All of these are worth something to us
- R.R. Donnelley's concept of setting de facto online standards
- Forums such as MIT/Stanford
- Industry watchdogs such as Yankee Group, Dataquest, etc., how do we work with them?

The Press

- With the next step of success we will need consistent stories to the press
 - Need to release our own press releases on Fulcrum and how it impacts our business
 - Designate single point of contact to all staff of WAIS when the press calls

Friends

- How much support do we provide to make them successful?

Partner Strategy

Currently we do not have a "partner strategy", but it would help us to delineate one. This is a list of our current partners to give a background.

A "partner" should be an important relationship with some multiplier effect. What do we want to get out of these important companies? Are we missing something? Are we sleeping with the enemy? What focus would be helpful?

Hardware companies: Intel, Apple, Sun

Client vendors: Ensemble, AppleSearch

Vertical App companies: Helpdesk, library, publishers, CDROM companies

Search engines: Fulcrum, Conquest, PLS

VAR/Integrators: PRC, RJO, NZ, Italy, France

Publishers: DowJones, EB, Scholastic, WestLaw

Foreign subsidiaries: Fujitsu, EB Japan

Network distributors: AOL

Current Company Structure

Brewster Kahle

June 18, 1994

Company Confidential

Ownership: 74% Brewster, 26% pool, about 14% allocated.

Funding (brewster): \$70k currently, peaked at \$100k.

Board: Bill Dunn, Brewster Kahle, John Duhring

President: Brewster Kahle

VP Business Info Services: John Duhring

VP of Sales Marketing: Bruce Gilliat

Dia Cheney: Human resources, bookkeeper, accnts payable receivable

Harry Morris: Architect, primary product development

Kevin Oliveau: DC manager/sales/contract fulfillment

Ben Lai: Technical Support

Margaret St Pierre: Protocol engineer (based in Philadelphia)

Gary Hromadko: Financial advisor to the board

Nick Sharf: Financial advisor

Ottavia Bassetti: Consultant on publishing projects

Lawyers: Wayland Brill of Hopkins and Carley

Bank: University National

Major options:

Pursue sale of the company (AOL)

Raise money by equity corporate partners (AOL, Fujitsu?)

Raise money by VC (put us on a going-public track?).

Donate 51% of stock (brewster's) to a new non-profit organization.

Start subsidiaries:

WAIS-fed DC spin-off, Fujitsu joint venture, EB Japan joint venture.

WAIS Inc. 1993 Cash Flow Projections

Company Confidential, 6/8/94

	1993 Total	1994 Total	Jul-93	Aug-93	Sep-93	Oct-93	Nov-93	Dec-93	Jan-94	Feb-94	Mar-94	Apr-94	May-94	Jun-94	Rest of 94	1995	1996
Receivables																	
Curtin	5,000	0															
U tenn		5,000			5,000												
Stanford Univ		15,000							15,000								
Rice	50,000	0															
Total: Edu	55,000	20,000	0	0	5,000	0	0	0	15,000	0	0	0	0	0	0	0	0
EB	5,000	72,000	2,000				60,000	5,000		5,000							
Intel		10,000		10,000													
pacbell		5,000	5,000														
Fujitsu		155,000					55,000								100,000		
ITU		5,000									5,000						
Boeing		69,300				34,300		35,000									
NQMS		15,000						15,000									
MarCorp		0															
WestLaw		60,000						30,000			30,000						
Delphi		15,000									15,000						
Adobe		12,000										12,000					
NY Law Publish		15,000												15,000			
Novell		15,000											15,000				
Subtotal: Com	5,000	448,300	7,000	10,000	0	34,300	115,000	85,000	0	5,000	50,000	12,000	15,000	15,000	100,000	0	0
Mitre		50,000			30,000	5,000						15,000					
Eisenhower/Ohio	5,000	10,000											10,000				
GPO		40,000							15,000	10,000			15,000				
EG&G		100,000				15,000						85,000					
LL Nat'l Labs		15,000				15,000											
USGS		5,000				5,000											
Lib of Congress		12,500									12,500						
SAIC		5,000						5,000									
HIS		15,000									15,000						
DOE- Tenn		15,000										15,000					
Los Alamos		15,000										15,000					
Govt Site License		160,000													160,000		
Subtotal: Gov	5,000	442,500	0	0	30,000	40,000	0	5,000	15,000	10,000	27,500	130,000	25,000	0	160,000	0	0
Total Products	65,000	910,800	7,000	10,000	35,000	74,300	115,000	90,000	30,000	15,000	77,500	142,000	40,000	15,000	260,000	0	0
Perot	200,000	0															
Scholastic		25,000					25,000									25,000	
NASA, JSC		45,570								22,785			22,785			22,785	
Dow Jones		75,000							50,000				0	25,000		25,000	
Fulcrum		50,000												50,000		150,000	
Pandora		4,500						4,500									
Intel																30,000	
Total Systems	200,000	200,070	0	0	0	0	25,000	4,500	50,000	22,785	0	0	22,785	75,000	0	222,785	0
Lib-o-Congress	12,000	19,500			19,500												
Secret	80,000	0															
DTIC		74,000										50,000		24,000		126,000	
Open Source		129,167								35,000	81,167			13,000			
EPA		4,750		4,750													
Total Gov Sys	92,000	227,417	0	4,750	19,500	0	0	0	0	35,000	81,167	50,000	0	37,000	0	126,000	0

Total 100%	357,000	1,338,287	7,000	14,750	54,500	74,300	140,000	94,500	80,000	72,785	158,667	192,000	62,785	127,000	260,000	348,785	0
Projected Receivables:																	
Total Products	65,000	910,800	7,000	10,000	35,000	74,300	115,000	90,000	30,000	15,000	77,500	142,000	40,000	15,000	260,000	1,850,000	3,000,000
Total Systems	200,000	200,070	0	0	0	0	25,000	4,500	50,000	22,785	0	0	22,785	75,000	0	750,000	3,000,000
Total Gov Sys	92,000	227,417	0	4,750	19,500	0	0	0	0	35,000	81,167	50,000	0	37,000	0	400,000	1,000,000
Total Revenue	357,000	1,338,287	7,000	14,750	54,500	74,300	140,000	94,500	80,000	72,785	158,667	192,000	62,785	127,000	260,000	3,000,000	7,000,000
Investment-bk																	
Total	4,211	44,500	20,000	4,500	20,000	0	0	0	0	0	0	0	0	0	0		
Expenses	Total	Total															
G & A (total)	4,592	30,800	2,289	394	5,651	714	777	1,388	1,134	2,361	5,278	1,706	4,959	4,150			
Rent	15,310	36,240		4,000	3,000	3,000	3,000	3,000	3,300	3,390	3,320	3,270	3,480	3,480			
Equip&Supply(T)	82,460	100,608	994	1,509	2,379	12,450	19,161	12,849	7,295	12,185	3,500	7,029	7,656	13,600			
Accounting	5,000	8,700	500	500	1,400	3,460	0	0	870	450	1,120	0	0	400			
Taxes	20,103	89,570	1,240	1,779	3,236	3,422	688	1,037	3,907	14,795	14,396	13,617	15,453	16,000			
Legal	20,787	8,715	1,268	1,268	878	1,083	0	995	910	0	514	899	0	900			
Mktg & Ad (T)	7,344	12,709	0	0	0	170	0	0	1,087	3,586	1,544	600	3,122	2,600			
Phones/Network	17,391	37,817	1,532	1,532	2,649	814	4,310	7,811	3,862	4,098	2,417	2,289	3,303	3,200			
Travel	39,762	36,870			2,202	6,101	5,021	3,723	1,150	3,373	2,590	3,964	5,246	3,500			
Salaries	237,789	382,502	0	14,895	30,232	22,124	29,152	97,173	36,424	28,951	32,086	28,035	30,998	32,432			
Employee Benefit	0	14,233	0	0	0	306	0	1,100	1,111	3,326	1,663	2,812	1,105	2,810			
Total	450,538	788,089	7,823	25,877	51,627	53,644	62,109	129,075	61,050	85,422	88,847	64,221	75,322	83,072			
			9,478	23,334	59,493												
Run 100%	-89,327	594,698	19,177	12,550	35,423	56,079	103,970	74,395	93,345	80,708	150,528	278,307	265,770	309,698	569,698		
Run Total	-89,327	594,698	19,177	12,550	35,423	56,079	126,970	92,395	111,345	98,708	168,528	296,307	283,770	327,698	587,698		
Employees																	
Engineers			3	3	3	3	3	4	5	5	5	5	5	5			
Mgmt/Sales			2	2	2	2	2	2	2	3	3	3	3	3			
Support			1	1	1	2	2	2	2	2	2	2	2	3			
Total			6	6	6	7	7	7	9	10	10	10	10	11			

Slaves of a New Machine: Exploring the For-Free / For-Pay Conundrum

Presented at the Fifth Conference on Organizational Computing, Coordination,
and Collaboration: Making Money on the Internet

Austin, Texas, May 10, 1994

Laura Fillmore
President, Online BookStore (OBS)
laura@editorial.com

I very much appreciate being here today, and thank Andrew Whinston and the people at the IC2 Institute, RGK, Texas Internet Consulting, and the University of Texas for inviting me to speak at this conference, Making Money on the Internet. I've picked up a lot of good tips, which I hope to apply at the Online BookStore (OBS) soon, because at the Online BookStore I am **not** making money by publishing on the Internet. And I don't know anyone who is. Since 1992 our company, the Online BookStore, has been involved in Internet publishing, and we have found it an exercise riddled with paradox and the unexpected, frequent bouts of optimism and what-if idea sessions, a conundrum whose parameters keep shifting.

We have enjoyed commercial success from publishing **about,** talking and meeting and consulting **about** publishing on the Internet, but are we making money from the real live act of online publishing for a price? Not yet. As far as I can tell, publishing intelligently in the distributed Internet environment still **costs** money. I don't think I am alone in this realization. I am coming to suspect that there may be no such as thing as publishing on the Internet, or rather, publishing according to the definition of publishing as we know it from our familiar paper reference points. This may not be the news you came to hear, but I am happy to share what insights I have with you.

The Online BookStore started out under the umbrella of Editorial Inc., a profitable publishing services business which I started in 1982, and which produced hundreds of books for publishers. In 1991, we had 19 employees, three offices, three shifts around the clock, and used desktop computers to produce such titles as *_The Sports Illustrated Almanac_* for Time/Warner, Andy Warhol's biography for Bantam Books, and *_Doing Business in Kuwait_* for Ernst and Young. We were part of a services industry trafficking in paper. Using computers, we were able to integrate the various publishing disciplines under

one roof, calling on hundreds of freelancers to supplement our in-house working staff and become a publisher's publisher of sorts, a virtual corporation.

We caught the desktop publishing wave when it was just a swell out at sea in the mid-eighties, and, in the resulting shift in the typesetting business from large centralized composition companies to distributed PC-based typesetting platforms, we rode the wave, and produced books using page composition systems such as PageMaker, Ventura Publisher, Scribe, TROFF, TEX, and Polaris Printmerge. Polaris PrintMerge was my favorite, not only because it was the first and crudest PC-based typesetting platform, but because it introduced me to the notion of electronic slavery, our topic of the day. Turn the clock back ten years, when my company was five people strong and I was salvaging a typesetting job someone had abandoned in frustration before the machine; it was a manual for hospital custodians, arranged in three columns, detailing how to keep a hospital clean and sanitary. The janitors, our future readers, were supposed to start on the upper left-hand column of each page with the instructions to don their uniforms, and then by the bottom right hand entry, they had to "clock out wearing uniform". Every page had the same layout for a different duty--mopping the floors, emptying the trash--all items in all columns had to align three across. Before the days of WYSIWYG, assessing one's success as a typesetter meant printing out again and again, at about five minutes per page. The deadline loomed. I would type and wait, type and wait, a period here, a comma there, a drone before the keyboard, caught up in the electromechanical semi- idiot production cycle. When I finally clocked out, called the Fed Ex man for the finished package, I vowed never again to wear the uniform of typesetter. I would hire typesetters.

This was my first personal experience with electronic servitude in the publishing context, though I didn't realize it at the time: I saw it as a business opportunity instead, which from a commercial standpoint it certainly was. I learned that users of Polaris PrintMerge, no matter how smart, would become the victims of badly designed software, would turn into drones, because that was their inevitable function vis-a-vis their task and the tools afforded them for completing the task; the humans workers functioned as the erring component, the wetware, charged with coaxing a right-or-wrong result out of a desktop computer.

This was the much-touted cutting edge, offering profit without honor and the opportunity to hire others to work Polaris PrintMerge till a better program came along--which happened startlingly fast. I hired others to stay up all night staring into screens, printing out, cursing the widows and orphans, and printing out again. This first generation of servitude involved securing output from single, unconnected machines, getting desktop computers to emulate the work of the large dinosaur machines lumbering reluctantly off into typesetting antiquity; we were selling output from these PCs, trying to recreate type of such quality that it did not appear to be what it was-- computer byproduct. So busily formatting the output of computers gave us a way to use and begin to understand the machines,

but of course, in hindsight, how could we have been anything else but servants to the machines? We did not apprehend the utility of our machines; using computers to wrestle with the static and formatted output of single machines was an error few perceived and many committed, are still committing.. We do what we know, and, with the gift of hindsight, can see that this act of manufacturing type on paper, produced by distributed computers sited in decentralized locations, constituted an intermediate step from static to kinetic publishing.

As so often happens with computers, the cutting edge of Desktop publishing became a swamp and then a backwater. It took about five years for publishers to discover that there are cheaper ways to typeset than paying New England style wages-- particularly when they can demand from desktop publishers something they never got or even knew they wanted from the large type houses--ownership of the typesetting files and the macros that created them. Savvy publishers types took advantage of the distributed environment coupled with the disconnectedness of it all to put the servitude of function together with the servitude of finance. People type fast when they are hungry, and a large part of the typesetting business, the keyboarding at any rate, after the advent of desktop publishing, migrated to romantic "offshore" locations--doublekeying in Taiwan or Jamaica or the Philippines proves more accurate and far less costly than paying a Massachusetts resident a living wage. So, while beginning to explore new avenues of employment in the areas of CDs and hypertext publishing, we continued to compete in the typesetting field, and got good prices for a while in Utah and the Southwest, even hired freelancers third-hand in Singapore and Haiti. Freelance typesetters in Haiti. the publisher hired me; I hired someone stateside to hire someone in-country to hire the keyboarder, and still, the publisher ended up paying maybe half what the job would have cost him at \$15 per hour. Our topic today is slavery.

In 1895, before Polaris Print Merge was ever invented, Oscar Wilde wrote, in "The Soul of Man Under Socialism," that "Unless there are slaves to do the ugly, horrible, uninteresting work, culture and contemplation become almost impossible. Human slavery is wrong, insecure, and demoralizing. On mechanical slavery, on the slavery of the machine, the future of the world depends." Somehow, in the arena of desktop publishing typesetting, human servitude to the exacting output demands of the machine is more the norm. The focus is output, and people become blind inputters of accurate information in the same way that minimum wage workers in supermarkets do when running barcodes over optical scanners.

I'm painting a grim picture, but the tide is about to turn. In the late '80s, we began to produce and typeset books about computer networking, books focusing on the structure and function of globally interlinked computers, which seemed to elicit life from people when used as a communications medium, rather than demeaning them when used as an output medium. One such title, probably the

first book on computer networks worldwide, was John Quarterman's book "The Matrix," published by Digital Press, which concerns computer networks and conferencing systems worldwide. In 1989, when we were working on the production of this book, the author introduced me to the then alien concept of electronic mail. My assistant would pick up mail from my lone correspondent, the author, print it out, put it in my in box, and I would handwrite responses which she would input and send back in due time. It sounds quaint, but it seemed to make sense to me at the time--in the same way computerized typesetting on distributed though unconnected PCs made sense. We do what we know.

Some of the messages he would send had nothing to do with the text of the book itself, however; messages posted to mailing lists from students in Tianamen Square during the uprising that Spring; messages from Alaskans offering first-person accounts of what the oil company wasn't telling us about the Valdez disaster. Fresh and unmediated communication about things that mattered from far corners of the world--news just hours old, unsanitized by the media. Here was information, digitally recorded voices, coming out of the new machine, which itself is a vast collection of interconnected machines being used as conduits for human thought. Where the Haitian freelance typist was hidden and voiceless behind four middlemen and had no hope of a phone no less an Internet connection, the students in Beijing and citizens of Alaska could talk electronically, and there were millions around the world who could and did listen immediately, electronically, and no one stopped them. The Internet is an open network, distributed, not contained, not owned by anyone.

I don't know if any Chinese students or Alaskan citizens profited in a commercial sense from their posting or "publishing" on the Internet--for, after all, what is publishing but writing for public consumption, regardless of the means of distribution or, in the case of Internet publishing, access--but they profited in other perhaps more valuable ways by making their voices heard as witnesses to events of their time. Clearly, in this case, the new and networked machine did not function simply as an output facilitator, a means of replication for familiar words on a paper page. It functioned as a kind of worldwide broadcasting medium.

Call it epiphany thanks to insight from the above incident, or call it simply local economic necessity, our business shifted in the direction of electronic publishing, and away from paper-based publishing. Another shift in the tide. The first major step in the new direction, which involved us creating work rather than producing it for publishers, was The Internet Companion: A Beginner's Guide to Global Networking by Tracy LaQuey, which was the first popular trade book about the Internet back in 1992. This book, produced with lightning rapidity and penned by a very gifted and knowledgeable author, seemed to grow beyond itself even before it was born and soon became a bestseller. At a time when there was precious little current copyright information on the Internet, and Acceptable

Use Policies stood in the way of for-profit publishing on the Net, we couldn't just put a book up there with a pricetag on it. It was a brave act for Tracy LaQuey to take the innovative leap, to take the words we both wanted people to pay for in the bookstores and give them away, in ASCII, on the Internet. That was the beginning of the Online BookStore in 1992. Many thousands came and grabbed those files; many wrote in asking for more. None of the users paid a dime.

However, a conundrum is a paradox of sorts, and counterintuitive as it may seem, giving the ASCII files away by anonymous FTP spurred the print sales of the book. Who wants to read hundreds of pages in ASCII, anyway? Even our publisher was supportive of our effort and happy with the resulting sales figures. They are not alone. Prentice Hall publishes Brendan Kehoe's "Zen and the Art of the Internet," which is available for free on the Net. His book continues to sell very well. The same applies for MIT Press's publication, "The Hacker's Dictionary," which is available for free on the net and sells briskly in paper as well. This leads to conundrum number one: that giving something valuable away for free can make money. It points to a richness not found in the tangible world quite so readily: the more I give to you the more I have. Some call this a new kind of marketing, and this was a pleasing lesson to learn. But was this experience really online publishing, or was it the success of an early hybrid of online/paper publication?.

The popularity of the online Internet Companion ASCII files drew my attention further away from paper, and I was seduced by the prospect of the then 10 million people on the Internet--10 million literate people with disposable incomes--attached to the Net. Why not acquire lots of Internet rights to lots of books and put them online at the Online BookStore? Surely some percentage of those people would buy files of a popular author's books for a reasonable price. So to test the concept that people would pay for books online, we approached one of the best-selling authors on the planet, Stephen King, and acquired first serial rights to a story from his new book, "Nightmares and Dreamscapes." The numbers were enticing: if only one percent of the ten million people paid \$5 for Stephen King's story, available only at the OBS and only on the Internet, then that's half a million dollars!

We tried to make it as widely appealing and usable as possible: we formatted it as a Voyager Expanded Book, in plain ASCII for those with only email access, In Adobe Acrobat, in HTML format for Mosaic aficionados, acquired the German rights, did a dual language edition, and released in time for the 1993 Frankfurt Book Fair, the largest book fair in the world. The result: they all came, the radio, the TV, the print media, creating lots of smoke and a nice firm footprint in the sand of Internet history, but sales? The half a million dollars in per-copy sales? All the companies who participated in bringing this story into its Internet incarnation--the Internet Company, Texas Internet Consulting, Viking Penguin, Hodder Stoughton, EUnet Germany, Hoffman und Campe, Aldea Communications, Bunyip, and the Online BookStore--we didn't pull in enough in

per-copy sales to pay the phone bills for setting up the deal. A vast amount of smoke, a tremendous marketing boost for the printed book again, lots of noise--and by extension, lots of profit for the publisher and for the author--but handfuls of per-copy sales. The per-copy sales model for a contained publication, a publication which is complete in and of itself and is not linked to anything else of significance on the distributed network, does not seem to work. The OBS is not the only online publishing site which has shown these results.

However, where per-copy faltered, site licensing proved a far better option, which resulted in some commercial satisfaction on all sides. We have sold site licenses to networks and organizations with good results. Site licensing offers exclusivity to the organizations and networks which optioned the work, while offering the author the reassurance of a having defined set of users, and a certain hedge of protection against rampant copying and posting for a profit of his work. One key element in site licensing seems to be timeliness; one publishes first online, before the information or ideas grow old and gather moss. Perhaps this site license model proves more lucrative than the per-copy sales model because it enables the licensor to give the information away for free (after paying for it), while achieving a defined benefit, a market advantage over its competitors, by giving away scarce information on an exclusive or semi-exclusive basis.

This same combination of for-free/for pay can be seen in the sponsorship model, the third commercial model after the per-copy and the site license, where, in the same way that Mobil Oil brings you Masterpiece Theatre, a company might sponsor a particular publication distributed for free on the Net. The familiar economy of having the book buyer, the purchaser of information, pay for the information, is reversed in sponsored publishing. The sponsor wins by having his name, his product, associated with the freely distributed text. A discreet screen of product information, a company logo attached to a file is all it takes. The money then flows thus: the sponsor pays a certain amount, probably pennies, each time someone picks up a file by anonymous FTP. The taker pays nothing at all. What is being sold here is not the information, but the *attention* of the reader; the information or the ideas function as a conduit for....marketing, again. Sponsorship is an easy and risk-free model, for the sponsor. What is at risk, of course, is the objective sponsorship of truth. Which company might have sponsored the students in Tianamen Square, for example?

We see this sponsorship model in frequent practice around the Net today, vast electronic for-free Internet sandboxes such as SUNsite, funded by Sun Microsystems and Cisco Systems and others. The sponsors gain by providing their equipment to people making creative use of it, so others will come and see what they are doing, and...buy the sponsors equipment or products. So, as the freely available ASCII files for the Internet Companion fueled the sales of the printed book, so too the freely available playground sandbox at SUNsite spurs the sales of the sponsors' wares. It is kinetic advertising at its best, and it

capitalizes on the fundamental shift in economics which fuels the new machine, the shift from the economy of scarcity, of buying and selling things, ideas incarnated as physical things, to the economics of abundance, where what is for sale isn't a thing at all, but the minds, the attention, of those paying attention to the ideas and information. Such an apparently "free" online environment makes for a welcome change, away from our common human penchant for owning and hoarding things with price tags on them. In the economy of abundance, the status of having shifts to the status of having access.

The notion of having access points to a fourth possible business model of publishing on the Net: subscription-based publishing. In the globally distributed multimedia hypertext environment-- that's a mouthful, but how else do you say it?--an environment where the traffic increases in the hundreds of thousands of percent annually, and nothing is but what it not, a subscription seems like another logical approach. Think of the digital stream analogy--does one want to buy a piece of the stream in a bottle, or does one want to subscribe to the stream and with that monthly subscription fee get all the fish, the pollywogs, the flowing water in which to bathe--as well as the flotsam and the jetsam from the guys upstream.

But even the subscription model comes up wanting in the Mosaic environment. Mosaic is, at this point, a free multimedia "browser" on the World Wide Web of interconnected computers. Widely hailed as the "killer app" for online publishing, Mosaic enables the users to navigate around the computers of the world, accessing, picking up, customizing anything that can be digitized--for free. But even were there tollgates firmly in place on every server in the world, still, I think the traditional subscription model would at least need adaptation from what we think of today when we think of a subscription to, say, cable TV or "The New Yorker," because Mosaic epitomizes the three defining aspects of the online publishing environment which are not found together in other broadcast and print media: its distributed, interactive, and recorded nature.

A year ago, in the pre-Mosaic boom days, it seemed to the point to say that "Content is King," and to think that successful online publishing meant offering easy and commercially viable access to content. It only takes a short journey with Mosaic, which has a learning curve of under half an hour for the beginning user, to realize that content is everywhere, and more is available every day. Content alone fast becomes irrelevant in the absence of context. What good are a hundred novels online, if the Net, the means of access, is not exploited to create a context, a way of thinking about and reading these novels? Might we not learn from the above for-free experiences, and consider a publishing model where readers are allowed free access to those novels, in return for the readers allowing a publisher to record and study their thought paths, the links they make while reading, thinking, and studying online? One may not want to pay \$5 for an online "contained" or finite, static, linear text of James Michener's "Chesapeake", but one might pay considerably more if one could follow the electronically generated

thought path resulting from a course taught by the author himself about factual fiction, a course where one could navigate the links students make in their critical thinking about the novel, navigate and link to related documents, graphics, videos, sounds, experiences, and the author himself--all in real time. How does one charge for such a contextual experience? What is in fact being published, and what is for sale? In the kinetic publishing environment, apparently the static text, the words, become subsidiary to their context as determined by each individual user.

The idea of publishers or other entities electronically tracking people's thought brings to mind George Orwell's "1984": "The telescreen received and transmitted simultaneously. Any sound Winston made, above the level of a very low whisper, would be picked up by it; moreover, so long as he remained within the field of vision which the metal plaque commanded, he could be seen as well as heard. There was of course no way of knowing whether you were being watched at any given moment. How often, or on what system, the Thought Police plugged in on any individual wire was guesswork. It was even conceivable that they watched everybody all the time. But at any rate they could plug in your wire whenever they wanted to. You had to live--did live, from habit that became instinct--in the assumption that every sound you made was overheard, and, except in darkness, every movement scrutinized..."

In the new field of kinetic publishing, the currency becomes thought itself, organized thought generated both individually and collectively, done so in a reciprocal environment.. One can envision an environment then where, like the big corporations funding places like SUNsite, perhaps individuals might segment their own computers, their own servers, into public and private sites. Given this scenario, publishing loses its lustre as an exclusive glamour industry, ceases to be an organized corporate activity and becomes rather a way of reciprocal interaction among minds, a community of thought where one pays for access to people and ideas in varying states of organization.

Online publishing is commercially successful today in the marketing sense, successful for those of us who still try to own and hoard, owning things as a bastion against mortality perhaps- -such marketeers are successfully protecting their back end business by doling out carefully controlled portions in obvious marketing efforts: a chapter here, a blurb there--and then selling the printed book or the manufactured product. Publishing on the individual level, however, might be more spontaneous, more complete, a freer marketplace of ideas that will enable the testing of the concept that time and attention can indeed prove valuable currency--currency which may not be defined in dollars- -online. Such an individual as a publisher might make a living on the Net, make his own Home Page, turn his "E" drive into a fast food joint or a used book shop along the Infobahn, into a public sandbox for people to link to and peruse, while maintaining a private segment to which real time access is licensed or sold, like having "This Space For Rent" (point to head).

Charging for thought, kinetic, real time thought, combined with recorded thought, what we used to call publications, might make money on the Internet. Again, as with the first Internet Companion example, this model is a hybrid, between what is living, real-time thought, and what is dead, that which is already recorded. We think by association, and associations are links. By thinking about something or someone we give it value. The World Wide Web of computers, where traffic in 1993 increased 341,000%, is a hypertext environment allowing for the globalization of associative thought, the accessing and weaving together of chunks of information into customized sets. Anything that can be digitized can be linked to: texts, graphics, videos, sounds, experiences such as online museum exhibits and libraries, and people as well can be linked to texts in real time via email. What is for sale in this hyperlife environment is the naming and pointing to resources, either live or dead, kinetic or static. If I were a net architect tasked with building an Ethernet and my boss wanted it done by tomorrow morning, I would pay dearly for the name of and online access to Bud Spurgeon, an Ethernet expert here at UT, and pointers to his online documents, and would pay most of all for access to him in real time to help me solve my problem. This problem might be worth a thousand dollars tonight, and nothing tomorrow, if I lose my job because I couldn't get the network up and running. If the online publisher offering this access to Bud, access which travels right up the chain of the hierarchy of intimacy from email to phone and even face-to-face, that publisher would be capitalizing on the multimedia capabilities of the webbed environment.

We are talking about buying and selling people in real time. This gets me back to the topic at hand: slavery. But no longer are we simply talking about typesetting a janitor's manual in Haiti, of tying people to keyboards so they can make the machines spit out pages in a highly regulated format. We are talking about selling the digitized mind of a human being who chooses to sell access to his own real-time interactive original thought. It would be prudent to strike a note of caution, a note given sonority by Orwell's words quoted earlier, and in light of the marketing lessons repeatedly learned from the commercial publishing models mentioned earlier: per copy, subscription, site license, and, importantly, sponsored publishing. It might prove worthwhile to identify two obvious routes we can follow at this juncture: the new field of transcendental computing, or the digitized slave route.

In a Webbed hyperlinked universe where pointing and naming is the way we know and make ourselves known, the latter route seems a distinct possibility, given the path blazed by our marketing and advertising folks on Madison Avenue. Think of athletes who function as flesh masked in a blaze of corporate insignias, logos and endorsements. In the online recorded environment, words matter: If I were really a savvy businessperson, I could charge companies for the spontaneous words I utter in support of their efforts. Bunyip programmers are brilliant. Texas Internet Consulting corners the market on Net demographics.

WAIS defines the standard for searching information on the Net. The Internet functions thanks to Cisco routers. Aldea Communications. Cyberspace Development Corporation. American Airlines. NEARNET. EUNET. Addison-Wesley. Milliman & Robertson. M&Q Plastics Company. Patterson Public Schools. It would be fair business practice for me to charge entities for my verbal endorsements because I have an audience, whether in real-time reality or virtuality. So my value as a pointer to others depends on the current value of my state of thought, and this whole models splits into two options: either the corporate slave model where people and their online incarnations are bought and sold, or to the new field of transcendental computing where creative Muse is supported. The second, and less commercially viable model, is the transcendental computing model, where the individual publisher is egoless in the distributed environment and functions independently of supporters to think objectively and deliberately, rather than thinking for the purpose of advancing either himself or his sponsor. Commercializing this model would be tantamount to marrying the transcendental eyeball with the OCR scanner, hardly an appealing prospect. It seems realistic to suppose that we are headed in the sponsorship direction, supplemented perhaps, ideally, by transcendental computing on the academic side.

If we look around us now, we can see lots of other people making money from the Internet. People selling hardware, connectivity, and software, they are making money. They are the means-makers. But once acceptable means are in place for, say, W3, what then? Will we see trading in the form of link brokers and URL futures? Will humans be bought and sold for their minds rather than for their ability to wash dishes or pick cotton? The Internet today is a multimedia environment, and it might be useful to consider the record industry for a final thought about where all this is going, for the conundrum before us involves assigning value to both recorded and live information. Recorded thought, ideas, or music, is in a sense dead. It is live when it is reciprocal, as a concert is reciprocal, or as, in a way, Karioke is reciprocal. As soon as the Rock band The Doors recorded "Break on Through", it became posterity, static, a commodity to be bought and sold, a commodity which increased in value after Jim Morrison himself was dead at a young age. In the New Machine, the recording of "Break on Through To The Other Side" might be available for free, while access to Morrison would cost dearly, and access to Karioke interaction with the Doors would cost as well.. These are the living, interactive links I am referring to, the links that bind us to our new online environment and enrich us, rather than the links that fetter us in servitude to the Great Records machine we are in the process of creating.

[5175 words]